

3.2.2

$$\begin{array}{r}
 x-1 \overline{) \begin{array}{r} x^2 + 5x - 1 \\ x^3 + 4x^2 - 6x + 1 \\ \underline{-x^3 + x^2} \\ 5x^2 - 6x \\ \underline{-5x^2 + 5x} \\ -x + 1 \\ \underline{x - 1} \\ 0 \end{array}
 \end{array}$$

$$\begin{aligned}
 D(x) &= x - 1, \quad Q(x) = x^2 + 5x - 1, \quad R(x) = 0 \\
 x^3 + 4x^2 - 6x + 1 &= (x - 1)(x^2 + 5x - 1) + 0.
 \end{aligned}$$

3.2.14

$$\begin{array}{r}
 x-2 \overline{) \begin{array}{r} x^2 + x \\ x^3 - x^2 - 2x + 6 \\ \underline{-x^3 + 2x^2} \\ x^2 - 2x \\ \underline{-x^2 + 2x} \\ 0 \end{array}
 \end{array}$$

3.2.40

$$-1 \left| \begin{array}{cccc} 1 & -1 & 1 & 5 \\ & -1 & 2 & -3 \\ \hline 1 & -2 & 3 & 2 \end{array} \right.$$

3.6.9 x -intercepts: (3,0), (-3,0)
 y -intercepts: none

3.6.18 Horizontal asymptote: $y = 0$
 Vertical asymptotes: $x = -1$

3.6.50 x -intercepts: (1,0), (-2,0)
 y -intercepts: none
 Horizontal asymptote: $y = 2$
 Vertical asymptotes: $x = 0$, $x = -1$

